

DISCUSSION

The Doleshal reference discloses a controlled environment around a submerged pile or other structure by means of encapsulation. The Doleshal reference addresses problems addressed by Applicant in his prior applications (now patents), but achieves the result in a different manner. Doleshal stops short of addressing that portion of the pile and header normally above the high water mark and also fails to disclose the composition of the encapsulation material.

Watts discloses a post assembly and method in which the post is already in position and a cover comprised of an end plate and a surrounding skirt is positioned atop the post in a close fitting relationship around the lower skirt edge after which the void between the cover and the post is filled with a foamed synthetic resin. The purpose of the cap of Watts is to prevent moisture from entering and deteriorating the post and cushions the post upon contact.

It is clear that in order to avail oneself of the teachings of the disclosure of Watts, the post or piling to which it is applied must be accessible. This would be possible with respect to piers or wharfs used for pleasure craft in which the piling is driven into the bay or river bed and extends upwardly above the platform area of the pier or wharf. Applicant's invention is directed primarily towards commercial piers or wharfs were

the upper end of the piling engages a header which header supports the pier or wharf platform. As such the top surface of the piling is inaccessible since it is already in mating contact with the header. Applicant therefore respectfully submits that the combination of Doleshal and Watts or Watts and Christenson would not render obvious the need to encapsulate the upper portion of a piling and header in order to protect it from marine microorganisms.

Wilson discloses a method of protecting a steel pipeline from the deleterious effects of moisture. Wilson sprays foam into a trench upon which the pipeline is laid in selective segments to provide a cushion and to interrupt contact of the lower circumference metal portion of the pipeline with the ground wherein water or moisture might accumulate or traverse. Wilson is not concerned with marine organisms, nor is he concerned with the submerged pilings. Just the opposite, Wilson is concerned with underground pipelines and contact with ground water. It is respectfully submitted that Wilson adds nothing to the combination of Watts and Doleshal or the combination of Watts and Christenson.

The Christenson reference discloses a method for protective encapsulation of submerged structural members and a composition of matter to accomplish such encapsulation. Indeed, since the inventor in the Christenson reference is the Applicant in the

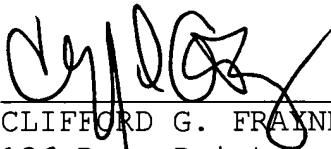
present application, it seems illogical to argue obviousness of the novel contribution based on the references cited. If it was so obvious, the Applicant would have noted its necessity at the time of its earlier novel contributions to this field, but the need was not evident nor obvious. It certainly was not evident or obvious to Doleshal because Doleshal neither discloses nor suggests the encapsulation of the upper portion of the pier and header. Watts would have one encapsulate the upper portion of a piling but only if it is accessible. If the piling is already in position with mounted header and pier or wharf platform, the disclosure of Watts is useless unless one first dismantles the pier or wharf.

Applicant respectfully submits that the application as amended, and in particular the claims as amended, overcome the rejection by the Examiner and the prior art references relied thereupon, and Applicant respectfully submits that a Notice of Allowance is warranted and an early notice of same is respectfully solicited.

Respectfully submitted,

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subject to submergence and thus the attack of microorganisms or marine borers. One way to address the problem would be to install the wrap as disclosed in the aforesaid patents to as high a point as possible on the piling. However, this solution does not protect the wooden or timber header which supports the pier or wharf. The more effective solution is to treat the upper portion of the piling 10 and wooden header 22 with a composition of matter 24.

The composition of matter 24 comprises a 100% solids, spray applied, aromatic polyurea coating which exhibits extraordinary toughness and elastomeric performance characteristics. It is applied in thicknesses of from 30-250mils or greater using multiple passes. It is seamless, abrasive resistant, and water proof and can be applied in situ.

In the preferred embodiment, the composition of matter 24 used to treat the upper portion of the piling and header is a foam comprising a mixture of isocyanate, up to 20 percent by weight, CHClF_2 , up to 2 percent by weight of water, and a combination of polyols having an average OH number of from about 300 to 500 and comprising polyalkoxylated glycerine having an OH number of from about 200 to about 300 in which the alkoxy groups each have from two to about three carbon atoms.

While the present invention has been described with respect to the exemplary embodiments thereof, it will be recognized by those of ordinary skill in the art that many modifications or changes can be achieved without departing from the spirit and scope of the



ANNOTATED SHEET SHOWING CHANGES

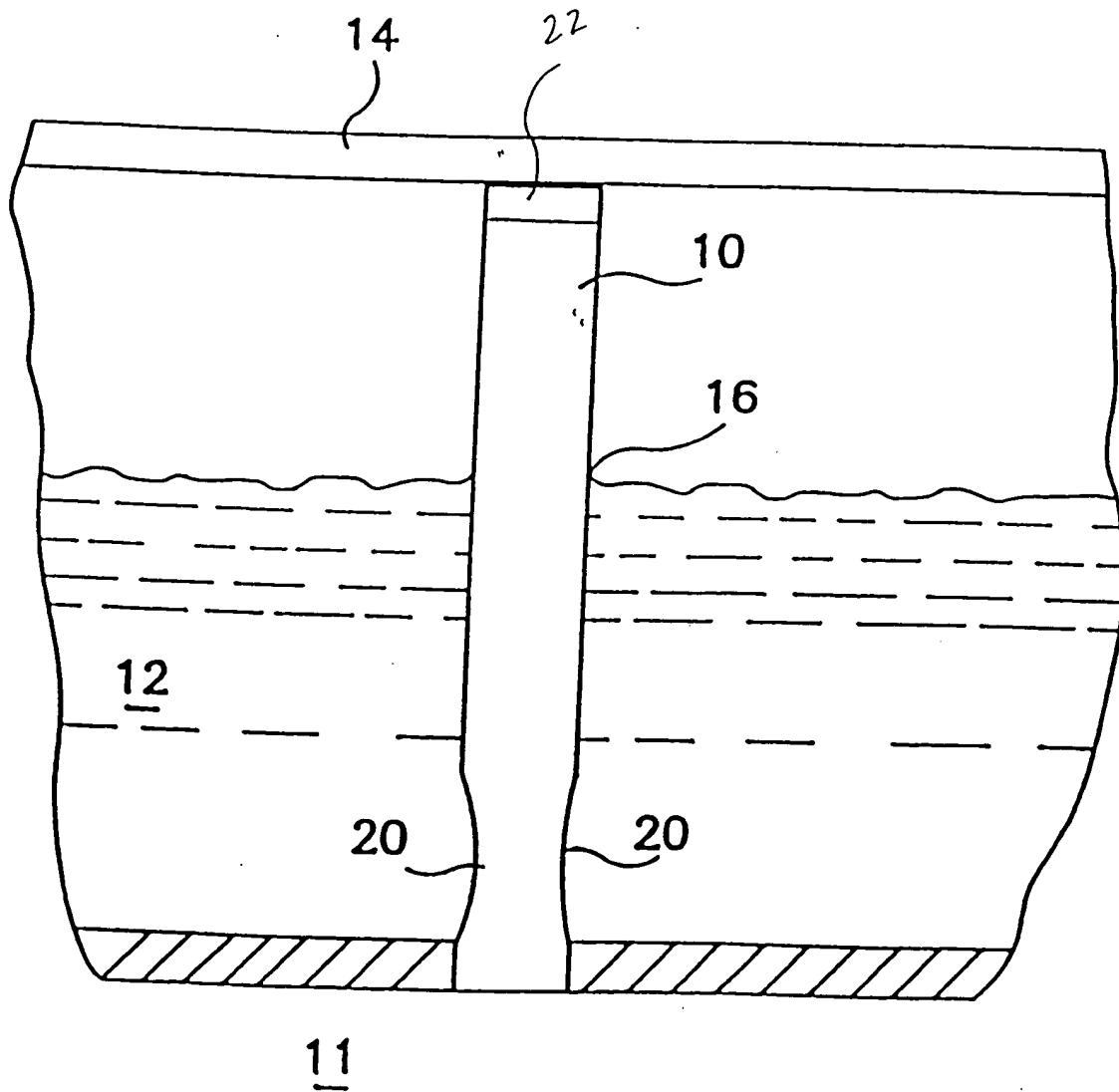


FIG. 1

Prior Art

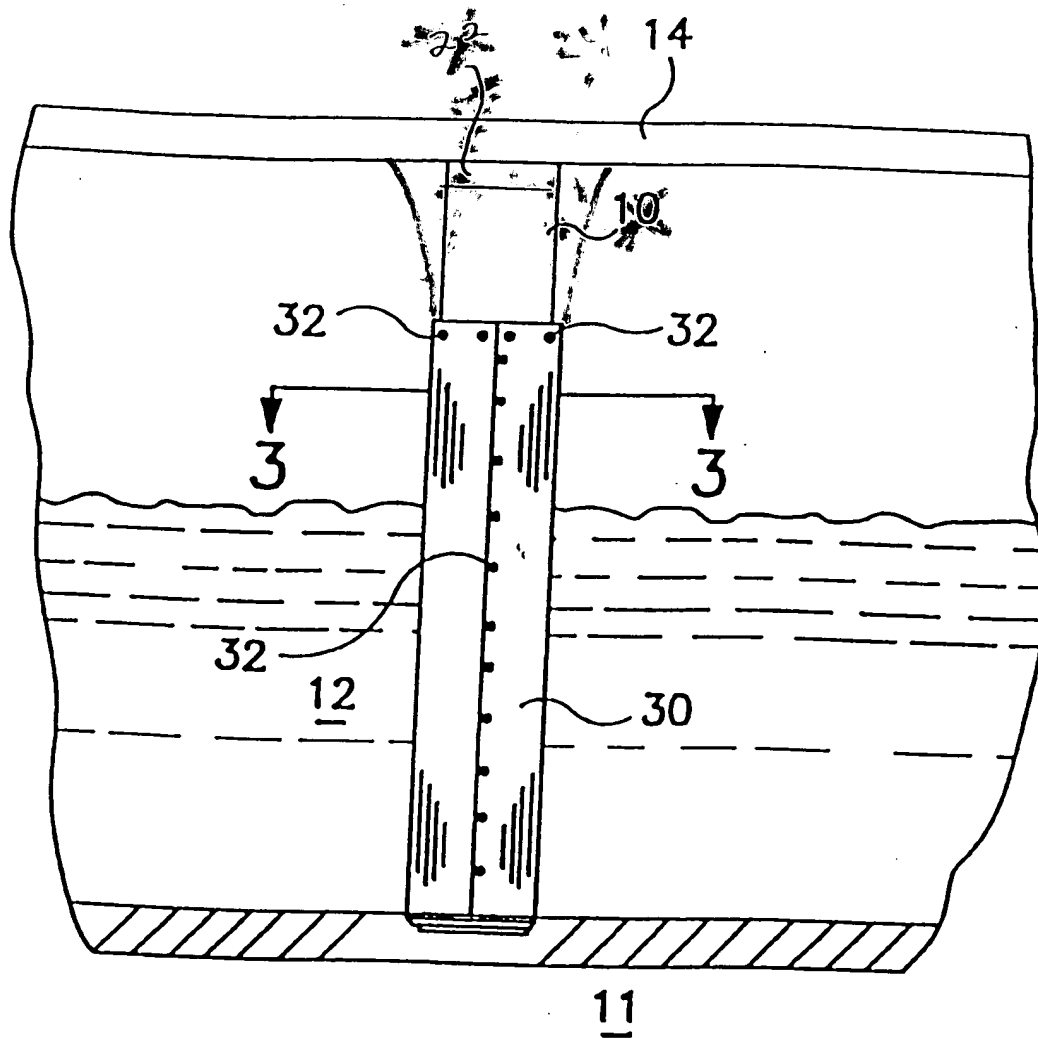


FIG. 2